

LI-OS05A20-MIPI-110H SPECIFICATION

**Rev 1.1
Leopard Imaging Inc.**

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LI-OS05A20-MIPI-110H SPECIFICATION

Version History

Version	Description	Release Date
1.0	First Release.	12. Dec. 2018
1.1	Deleted info quoted from sensor spec.	20. May. 2022

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Key Information

Module Part#		LI-OS05A20-MIPI-110H
Module Size		40.5 (L) x 22.0 (W) x 24.4 (H) mm
Sensor Type		OS05A20 Color sensor
Array Size		2688 (H) x 1944 (V)
Power Supply	Core	1.2V (nominal)
	Analog	2.8V (nominal)
	I/O	1.8V (nominal)
Lens		1/2.7"
F/No.		2.4
Focal Length		2.8 mm
View Angle		110° (H)
TV Distortion		< -25%
Object Distance		20 cm ~ Infinity
Sensitivity		13,000 e-/Lux-sec
Pixel Size		2 x 2 μm
IR Cut Filter		Yes
Temperature Range	Operating	-30°C to +85°C
	Stable	0°C to +60°C
Output Formats		RGB RAW output
Maximum Image Transfer Rate		2688 x 1944 @ 60 fps
Dynamic Range		74 dB @ 16 x gain
Lens Chief Ray Angle		11° linear
Input Clock Frequency		6 ~ 27 MHz
Power Requirement	Active	210 mW
	Standby	2 mA
	XSHUTDOWN	2 uA
Fixed Pattern Noise		TBD
Shutter		Rolling shutter
Max S/N Ratio		39 dB
Image Area		5434.56 x 3948.05 μm
Package Dimensions		6638.8 x 5935 μm

Pin Assignment

No.	Name	Pin Type	Description
1	SDA	I/O	SCCB data
2	SCL	Input	SCCB input clock
3	DOVDD1.8V	Power	Power for I/O circuit
4	MCP	Output	MIPI clock positive output
5	MCN	Output	MIPI clock negative output
6	DGND	Ground	
7	MDP0	Output	MIPI data positive output
8	MDN0	Output	MIPI data negative output
9	DGND	Ground	
10	MDP1	Output	MIPI data positive output
11	MDN1	Output	MIPI data negative output
12	DGND	Ground	
13	PWDN	Input	Power down (active low)
14	ATEST	Reference	Analog test
15	AGND	Ground	
16	NC		
17	SID	Input	Chip ID selection
18	DVDD1.2V	Power	Power for digital circuit
19	XCLK	Input	System input clock
20	STROBE	I/O	Strobe output
21	XSHUTDOWN	Input	Reset and power down (active low)
22	AVDD2.8	Power	Analog power
23	NC		
24	DGND	Ground	

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Mechanical Diagram

ROHS

Autodesk 教育版产品制作

LI-OS05A20-MIPI-110H

QR-RD-F002 Rev-A

advert:
basic tolerance: ±0.1mm
label have "*"is emphasis dimension

TOP VIEW

SIDE VIEW

BOTTOM VIEW

NO.	ITEM	QTY	DESCRIPTION
1	Steel	2	
2	FPC	1	
3	TAKING LENS	1	OS05A20
4	Sensor	1	AXT024174
5	Connector	1	

NO.	SYMBOL	DESCRIPTION
1	SMA	
2	SCL	
3	DO001.8V	
4	MCP	
5	MGN	
6	DGND	
7	MOP0	
8	MUND	
9	DGND	
10	MUP1	
11	MUNI	
12	DGND	
13	FMND	
14	AEST	
15	AGND	
16	NC	
17	S0	
18	DW01.2V	
19	XCLK	
20	STROBE	
21	XSHUTDOWN	
22	AD02.8V	
23	NC	
24	DGND	

Optical Lens Specification:
 Focusing Range 20cm ~ Infinity
 Focal Length 2.8mm
 F Number 2.4
 Fov(H) 110°
 TV distortion <25%

Note: # Image direction register use default settings.
 Output format: Color RAW FPC 做4层板 XSHUTDOWN connect to DOVDD

Leopard Imaging Inc.

NO	Change item	Version	Date
e	Original	V1.0	2018-12-05

Draft:	Date:	Project Name:
Check:	Date:	LI-OS05A20-MIPI-110H
Approval:	Date:	

Reinforcement: 10F1 Version: 1.0
 Proportion: 1:1 Unit: MM